

What is claimed is:

1. A friction stir welding method, comprising:

preparing plural members, each having projections at end portions of a plate that protrude toward a direction of thickness of the plate;

butting an end portion of the plate against an end portion of an adjacent plate, wherein the thickness of the plate of at least one member is different from the thickness of the plate of another member, and the protruded height of the projections on the plates at a butt joint portion where the plate thickness is large is smaller than the protruded height of the projections on the plates where the plate thickness is small, and the protruded height of the projections on the plates at a butt joint portion where the plate thickness is small is larger than the protruded height of the projections on the plates where the plate thickness is large; and

inserting rotary tools of the same size with the same insertion depth to the plates from the side having the projections, and performing friction stir welding.

2. The friction stir welding method according to claim 1, wherein

said members are hollow shape members; and

each of the hollow shape members comprises two substantially parallel face plates, connecting plates connecting the two face plates, and projections formed at width-direction-end portions

of the hollow shape member.

3. A group of shape members for friction stir welding, comprising:

plural shape members each having projections at end portions thereof;

the plural shape members butted against each other to form plural butt joint portions to be subjected to friction stir welding; wherein

the protruded height of the projections at the butt joint portion where the plate thickness is large is smaller than the protruded height of the projections where the plate thickness is small, and the protruded height of the projections at a butt joint portion where the plate thickness is small is larger than the protruded height of the projections where the plate thickness is large.

4. The group of shape members for friction stir welding according to claim 3, wherein

the thickness of the shape members including the projections and the plate are the same for all the shape members in the group.